Personal Protective Equipment: Best Practices and Procurement Strategies

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Disclosures

There is no commercial support for today's webinar

Neither the speakers nor planners for today's webinar have disclosed any financial interests related to the content of the meeting

This webinar is meant for healthcare facilities and is off the record and reporters should log off now.



DISCLAIMER

• This is a rapidly evolving situation so the information being presented is current as of today (10/13/2020), so we highly recommend that if you have questions after today, you utilize the resources that we will review at the end of this presentation.



Today's Agenda

- Basics: Cal/OSHA Aerosol Transmissible Disease Standard
- Appropriate PPE use for staff at Community Care Facilities
- PPE donning and doffing practices
- PPE conservation practices
- PPE storage, tracking, and procurement strategies for Community Care Facilities
- County and State resources to procure PPE



Basics: Cal/OSHA Aerosol Transmissible Diseases Standard





Cal/OSHA Interim Guidance on COVID-19 for Health Care Facilities: Severe Respirator Supply Shortages

Note: This Interim Guidance is Subject to Change as the Situation Evolves

August 06, 2020

Summary

This guidance is for healthcare and other employers covered by Cal/OSHA's Aerosol Transmissible Diseases (ATD) Standard (title 8 section 5199). It discusses respirator requirements for covered employers who care for suspected or confirmed COVID-19 patients when there are severe respirator shortages. This guidance replaces previous guidance of June 12, 2020, regarding respirator use during severe respirator supply shortages. While supply chains for obtaining respirators are not fully restored, the supply of respirators for hospitals and other employers involved in patient care has improved to a point that prioritization of respirators for high hazard procedures and some other optimization strategies are not currently necessary. This guidance also contains new optimization strategies to reduce the use and destruction of respirators during the fit testing process. This guidance is subject to change as circumstances evolve.

https://www.dir.ca.gov/dosh/coronavirus/Cal-OSHA-Guidance-for-respirator-shortages.pdf



Cal/OSHA Aerosol Transmissible Disease Standard

- The Cal/OSHA Aerosol Transmissible Diseases (ATD) standard was adopted in 2009
 - To protect employees who are at increased risk of contracting certain airborne infections due to their work activities.
 - The standard is codified in title 8 of the California Code of Regulations, <u>section</u>
 5199.
- This California workplace safety law requires certain employers with employees exposed to aerosol transmissible diseases (ATD) to have effective written safety plans, provide protective equipment as needed, and train employees on safety procedures.
- Scope and Application: Applies to high-risk settings--acute care hospitals, clinics,
 SNFs, CCFs, corrections, homeless shelters, laboratories and more
- https://www.dir.ca.gov/title8/5199.html

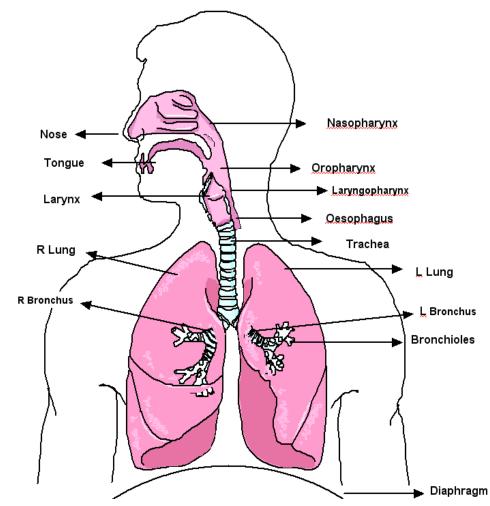
What Is An Aerosol Transmissible Disease?





 A disease transmitted by aerosols (a gaseous suspension of fine solid or liquid particles)







Modes of Person to Person Transmission of Infectious Agents

There are three main modes of transmission of infectious agents:

Airborne

- --Small particles that are inhaled (smaller than $\sim 0.3 \mu m$)
- --Examples: tuberculosis, measles, varicella

Droplet

- --Large droplets (greater than ~0.3 μm) that hit mucous membranes
- -- Examples: COVID-19, pertussis, meningococcal infections

Contact

- --Direct contact with infectious particles
- -- Examples: Methicillin resistant *Staphylococcus aureus*



Airborne Precautions

- All suspect or confirmed cases should be placed in Airborne Infection Isolation Room
- N95 respirator should be used for potentially infectious patients, and PAPRs should be used for high risk procedures such as surgeries, autopsies or bronchoscopies
- Careful attention to proper donning & doffing of respirators, including seal check and <u>hand hygiene before & after</u>
- Face mask for pt. during transport
- Alert others if need to transfer

Droplet Precautions

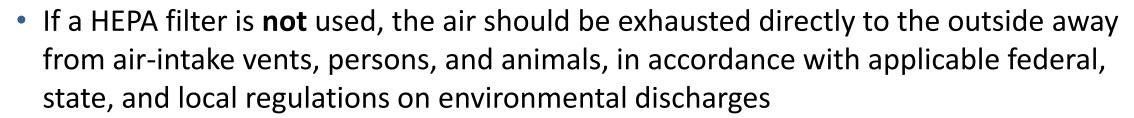
- No special air handling or facility ventilation required
- HCWs wear surgical or procedure mask if within 6 ft of patient
- Single room preferred
- Mask patient if transport necessary (if tolerated), follow respiratory hygiene/cough etiquette
- Eye protection (face shield/goggles) if splashing, spraying anticipated

Administrative, Engineering Controls and Personal Protective Equipment are required



Characteristics of an Airborne Isolation Room (AIIR)

- Negative pressure causes air to flow from the corridors into the All room.
- Air from the room is exhausted directly to the outdoors or passed through a special high efficiency particulate air (HEPA) filter that removes most (99.97%) of the droplet nuclei before it is returned to the general circulation.



- All rooms should have airflow of six or more air changes per hour (ACH). In new or renovated health-care settings, All rooms should have airflow of at least 12 ACH.
- Using air-cleaning methods: room-air recirculation units containing HEPA filters or ultraviolet germicidal irradiation (UVGI) systems that increase the equivalent ACH.

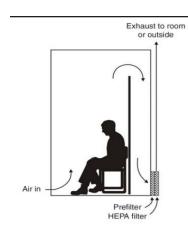




TABLE 1. Air changes per hour (ACH) and time required for removal efficiencies of 99% and 99.9% of airborne contaminants*

| | Minutes required for removal efficiency [†] | | | | | |
|-----|--|-------|--|--|--|--|
| ACH | 99% | 99.9% | | | | |
| 2 | 138 | 207 | | | | |
| 4 | 69 | 104 | | | | |
| 6 | 46 | 69 | | | | |
| 12 | 23 | 35 | | | | |
| 15 | 18 | 28 | | | | |
| 20 | 7 | 14 | | | | |
| 50 | 3 | 6 | | | | |
| 400 | <1 | 1 | | | | |

Source: CDC



Face Masks vs. N95 Respirators



- FDA approved
- Protects against large droplets, splashes
- Loose-fitting, not
- Does not filter out small aerosols







- Respirators: CDC/NIOSH approved under title 42 CFR, Part 84
 - Nonpowered air-purifying respirators, Powered air-purifying respirators
 (PAPRs) and Supplied-air respirators
- Tight fitting respirator
- Protects the wearer
- Filters air that you breathe
- Requires a Fit test and Seal check



Nonpowered Air-Purifying Respirators

| | Filter Efficiencies | | | | | | |
|---|---------------------|-----------|---------------|--|--|--|--|
| Resistance to efficiency filter degradation | 95 (95%)* | 99 (99%)* | 100 (99.97%)* | | | | |
| N (not resistant to oil) | N95 | N99 | N100 | | | | |
| R (resistant to oil) | R95 | R99 | R100 | | | | |
| P (oil proof) | P95 | P99 | P100 | | | | |

^{*} The percentages in parentheses indicate the minimum allowable laboratory filter efficiency value when challenged with 0.3 µm particles









FIT Testing

- To obtain adequate respiratory protection, a proper fit must exist between the respirator and the user
- Fit test means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual
- Fit testing provides an opportunity to check for problems with the respirator use
- Recognize the medical signs and the symptoms that may limit or prevent an employee's use of a respirator

Fit Testing Methods







Quantitative
Objective

- CCR5144: Respiratory Protection Program provides guidance on what needs to be done prior to fit testing, during fit testing, Respiratory Protection training, and recordkeeping: https://www.dir.ca.gov/title8/5144.html
- Cal/OSHA Fact sheet on Respiratory Protection: https://www.dir.ca.gov/dosh/dosh_publications/respiratory-protection-fs.pdf



Resources for FIT Testing

- YouTube qualitative video tapes on manual fit testing as examples
 - https://www.youtube.com/watch?v=xl4qX6qEYXU
 - https://www.youtube.com/watch?v=wulG-l2KiFo
- YouTube quantitative video tape on PortaCount
 - https://www.youtube.com/watch?v=SeqgFwB16FE
 - https://www.youtube.com/watch?v=FtRQCvBO5zU
 - https://www.youtube.com/watch?v= zRD2GKUkBs&list=PLslI66ipjlt6pvzHxVnBHYCai10v7
 O60L&index=5
 - https://www.youtube.com/watch?v=sVXQyPkivN8& list=PLslI66ipjlt6pvzHxVnBHYCai10v7O60L&index=4

Onsite fit testing services also available

Some models of different masks available

N95 masks provide good protection against the haze as they are at least 95% efficient against fine particles that are about 0.1 – 0.3 microns. It is even more efficient (99.5% efficient) against particles that are 0.75 microns and larger.



3M-8210 Most common model in the market



3M – 1860 Commonly used in healthcare institutions



3M – 8110S (Similar to 3M – 8210 but for smaller faces)



3M – 1860S (Similar to 3M – 1860 but for smaller faces)



Dräger Piccola FFP3
Cone-shaped mask for better fit



Rimberly-Clark 46727 Pouch-style, large breathing chamber for added comfort

Saccharin Qualitative Fit Test kit found here: https://www.grainger.com/product/3M-Fit-Testing-Kit-1CD80

For guidance, please contact the Los Angeles County Department of Public Health at 213-240-7941 during daytime hours



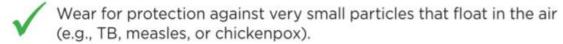












- Follow manufacturer's instructions for donning and doffing of N95 respirator.
- Ensure proper fit—making sure nose and mouth are completely covered. The N95 respirator must have a complete seal all around. Complete face seal check after donning the respirator.
- Mold the respirator over the bridge of your nose when putting it on to help keep the N95 respirator on and fitting properly. It is also helpful to press all around the face seal to be sure it is tightly in place.
- Tilt head forward and remove the N95 respirator by pulling bottom strap over back of head, followed by the top strap without touching the front of mask. Keep straps tight during the removal process.
- Discard an N95 respirator by touching straps only. Perform hand hygiene before and after use of an N95 respirator or any type of personal protective equipment, such as your gloves and gown.
- Remove the N95 respirator when no longer in clinical space and the patient intervention is complete.













- DON'T wear if wet or soiled; get a new N95 respirator.
- DON'T reuse; toss it after wearing once.
- DON'T let patients or visitors wear N95 respirators unless they've been fit tested to wear them.
- DON'T wear an N95 respirator that hasn't been properly fit tested. Proper fit is essential.
- DON'T use the N95 respirator if air leaks around the respirator edges.
- DON'T touch the front of the N95 respirator as it is contaminated after use. DON'T snap the straps, as that may spread germs.
- DON'T share your N95 respirator with others; germs can spread that way.
- DON'T leave an N95 respirator hanging around your neck.

Double Masking



Masks with valves







Respirator On / Respirator Off

When you put on a disposable respirator

Position your respirator correctly and check the seal to protect yourself from COVID-19.



Cup the respirator in your hand. Hold the respirator under your chin with the nose piece up. The top strap (on single or double your head. The bottom strap is positioned around the neck and



Place your fingertips from both hands at the top of the metal nose dip (If present). Slide fingertips down both sides of the metal strip to mold the nose area to the shape of your nose.



Place both hands over the respirator, take a quick breath in to check the seal. Breathe out. If in or breathing out, there is no



Select other PPE Items that do not Interfere with the fit or



Do not use a respirator that appears damaged or deformed, no longer forms an effective seal to the face, becomes wet



Do not allow fadal hair, Jewelry, glasses, clothing, or anything else to prevent proper placem or to come between your face



Do not crisscross the straps.



Do not wear a respirator that does not have a proper seal. If air leaks in or out, ask for help



Do not touch the front of the respirator during or after usel it may be contaminated.

When you take off a disposable respirator



bottom strap over back of head, followed by the top



Discard in a waste container.



Clean your hands with or soap and water.

Employers must comply with the OSHA Respiratory Protection Standard, 29 CFR 1910.134, which includes medical evaluations, training, and fit testing

al information is available about how to safely put on and remo personal protective equipment, including respirators

cdc.gov/coronavirus

Facemask Do's and Don'ts

For Healthcare Personnel

When putting on a facemask

Clean your hands and put on your facemask so it fully covers your mouth and nose.





When wearing a facemask, don't do the following:





DON'T wear your facemask under your nose or mouth.



DON'T touch or adjust your facemask without cleaning your hands before and after



DON'T wear your facemask





When removing a facemask

Clean your hands and remove your facemask touching only the straps or ties.



DO leave the patient care area, then clean your hand with alcohol-based hand



touching ONLY the straps or ties, throw it away*, and clean your hands again.

"If implementing limited-rouse Facemasks should be carefully folded so that the outer surfa is held inward and against itself to reduce contact with the oute surface during storage. Folded uses in a dean, sealable pape

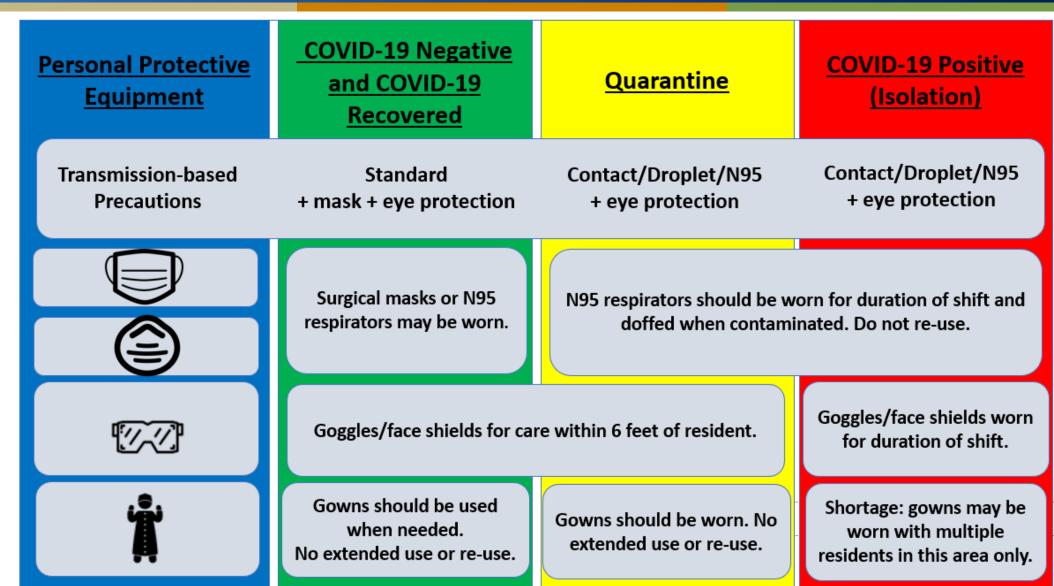
Additional information is available about how to safely put on and remove personal protective equipment, including facemasks: https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html.

cdc.gov/coronavirus





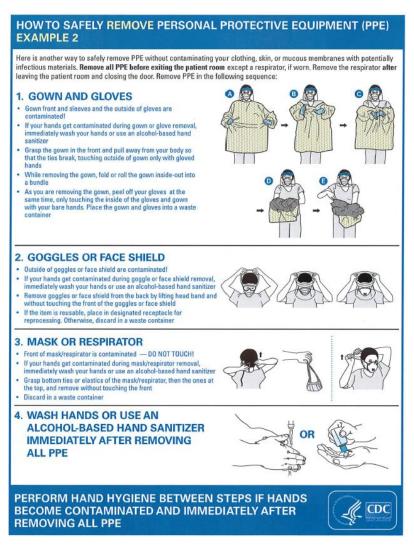






Sequence for Putting on (Donning) and Taking Off (Doffing) PPE









This poster features some key points from "<u>Guidance for Congregate Residential Facilities</u>"

It is not a replacement for the guidance, the full set of recommendations specified in the guidance should be followed.

1. Reducing risk of infection







- Screen everyone entering the facility for COVID-19 symptoms (fever, cough, sneezing, etc.) and check temperatures per LAC DPH guidance. Anyone with a fever or COVID-19 symptoms may not enter. Assess all residents at least once a day for symptoms if able, and check temperature every 12 hours in care giving facilities. Remind residents to report new symptoms to staff.
- Rearrange common areas to make physical distancing easier and cancel group
 activities/meals unless they can be held outdoors with physical distancing. Face
 coverings must be worn when not eating. Do not share cups, utensils, food, or drinks.
- · Restrict visitation in the facility to essential staff only.
- All residents in the facility should be encouraged to wear a face covering unless <u>contraindicated</u>. Staff and visitors must wear a face covering, surgical mask, or N95 respirator, as appropriate.

2. Testing for COVID-19



- Use the LAC DHS Reference Guide or the California Testing Taskforce to find a lab.
- . Follow LAC DPH testing recommendations on testing staff and residents.

3. Isolation and quarantine



- Isolate COVID-19 positive residents in their rooms or isolation areas or in cohorts with other COVID-19 positive residents. Have dedicated staff to prevent spread of infection to other areas.
- Implement targeted testing for all close contacts of positive cases.
- Institute quarantine for 14 days for residents or staff who have been in close contact with a COVID-19 positive resident or staff per LAC DPH guidance.

4. Personal protective equipment



- . Post signs on the proper donning and doffing of PPE.
- Follow LAC DPH guidance on PPE requirements for different categories of residents.

5. Sanitation



- Clean with <u>EPA</u> approved disinfectants, using product instructions and LAC DPH <u>cleaning</u> <u>guidelines</u>.
- Provide adequate and easily accessible handwashing stations with paper towels and tissues, as well as alcohol-based hand sanitizer dispensers.

6. Travel



 Restrict travel for all residents to medically essential trips. Alert transportation, driver, and destination of patient's COVID-19 status. Patient, driver, and any escorts must wear face coverings.

For specific information on each of these recommendations, please see the <u>Guidance for Congregate Care Facilities</u> on the <u>DPH Community Care Facilities webpage</u> by visiting the link below or by scanning the QR code to the right.



Los Angeles County Department of Public Health publichealth.lacounty.gov/acd/nCorona2019/healthfacilities/ccf Infection Prevention in Community Care Facilities, Revised 9/25/20



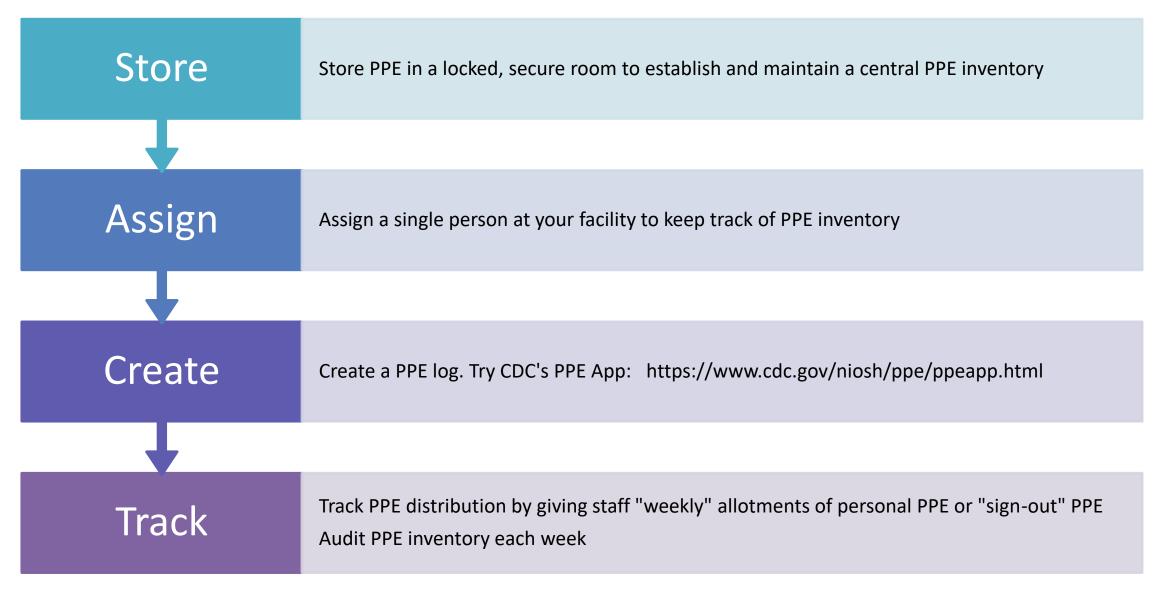


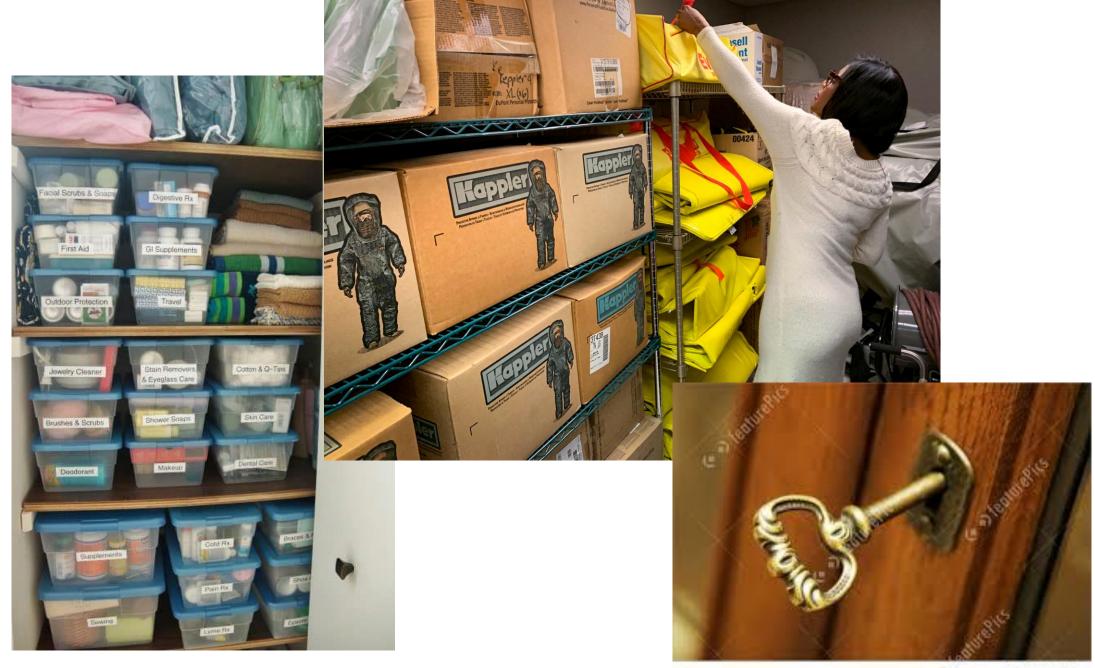


PPE Procurement and Tracking Usage











CDC PPE Tracker:

| Calculat | tor | Grap | | Instruc | | | | | | | | | | | |
|----------------|----------------------------------|-------------|----------------|------------------|------------------|--------------------------------|---------------|---------------|---------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Во | ox A | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | xx/xx/2020 of the Day? Ente | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 | XX/XX/2020 |
| | | How Many C | OVID-19 Patier | nts are Being Tr | eated at Start o | of the Day? Ente | r Below. | | | | | | | | |
| | Suspected and VID-19 Patients | 20 | 20 | 28 | 26 | 3 | 5 36 | 5 4 | .0 4 | 0 | | | | | |
| Type of PPE | Size/Brand | How Many F | | | art of the Day? | | | | | | | | | | |
| | Size 1 | 500 | | | | | | | | | | | | | |
| Gowns | Size 2 | | | | | | | | | | | | | | |
| | Size 3 | | | | | | | | | | | | | | |
| | small | | | | | | | | | | | | | | |
| Gloves | medium | | | | | | | | | | | | | | |
| Gioves | large | | | | | | | | | | | | | | |
| | extra large | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Respirators | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Surgical Masks | | | | | | | | | | | | | | | |
| 5 Chi-lil- | | | | | | | | | | | | | | | |
| Face Shields | | | | | | | | | | | | | | | |
| Other | 1 | 1 | | | | | | | | | | | | | |
| Other | 2 | 2 | | | | | | | | | | | | | |
| Other | 3 | 3 | | | | | | | | | | | | | |
| Other | 4 | 1 | | | | | | | | | | | | | |
| Other | | | | | | | | 1 | | <u> </u> | | | | 1 | 1 |
| Во | ох В | Total Numbe | r of Boxes Use | d per Day (Calc | ulated) | | | | | | | | | | |
| ype of PPE | Size/Brand | | Day 1 -Day 2 | | Day 3 - Day 4 | Day 4 - Day 5 | Day 5 - Day 6 | Day 6 - Day 7 | Day 7 - Day 8 | Day 8 - Day 9 | Day 9 - Day 10 | Day 10 - Day 11 | Day 11 - Day 12 | Day 12 - Day 13 | Day 13 - Day 14 |
| | Size 1 | | 25 | | | | | | | | | | | | |
| Gowns | Size 2 | | | | | | | | | | | | | | |
| | Size 3 | | | | | | | | | | | | | | |
| | small | | | | | | | | | | | | | | |
| Gloves | medium | | | | | | | | | | | | | | |
| | large | | | | | | | | | | | | | | |
| | extra large | - | - | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | - | | | | | | | | | | | | | |
| Respirators | | | | | | | | | | | | | | | |
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| | | | | İ | | İ | | | 1 | | | | | | 1 |
| Consider March | | | | | | | | | | | | | | | |
| Surgical Masks | | | | | | | | | | | | | | | |
| Face Shields | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Other | 1 | | | | | | | | | | | | | | |
| Other | 2 | | | | | | | | | | | | | | |
| ther | 3 | | | | | | | | | | | | | | |

PPE AUDITS

- Review PPE inventory at the end of each week
- Define a weekly PPE burn rate (or how much PPE did your facility used in last week)
- Consider ways to conserve PPE
 - Implement re-use protocols
 - Avoid unnecessary PPE use (preserve for outbreaks and/or PUIs)
 - Cohort staff for outbreaks and/or PUIs and implement extended use protocols
- Anticipate "surge" PPE needs if the facility were to experience a COVID outbreak
- Re-order PPE to ensure a 30 day supply on-site









Establish your PPE "Burn Rate" or how much PPE your site uses every month



Build your PPE supply chain by identifying routine PPE suppliers



Maintain a 30 day supply of PPE on-site and re-order PPE in timely manner



Create a budget for ongoing PPE needs



Where to purchase PPE?

- Medical suppliers like McKesson, 3M, etc
- Amazon or other online vendors (ensure NIOSH certified N95s)
- Look for charitable donations in your community or online: https://getusppe.org/request/



PPE Procurement through State and County Agencies



Requesting PPE from CCLD

- Your Regional Office or Regional Center schedules periodic distribution dates to pick up PPE supplies when supplies become available.
- For urgent needs
 - contact your Regional Office or Regional Center
- https://www.cdss.ca.gov/Portals/9/CCLD/ASC.pdf
- https://www.dds.ca.gov/rc/listings/



Requesting PPE from LACDPH

- LACDPH has been tasked with providing PPEs to a variety of providers, including community care facilities in Los Angeles County.
- LACDPH collaborates with CCLD and Regional Centers
- Recommendations:
 - Regularly check with commercial vendors for availability of supplies
 - Maintain a minimum of 30-day supply
 - Type, quality, and amount of PPE is dependent on what is available at the State
 Warehouse
 - Ensure CCLD has your current e-mail address and cell phone numbers
 - Monitor your e-mail regularly for notifications regarding PPE availability
- General E-mail inquiries about PPE supplies <u>DPHPPECoordinator@ph.lacounty.gov</u> <u>http://publichealth.lacounty.gov/acd/ncorona2019/PPE.htm</u>



Resource Links

- LAC DPH coronavirus website: http://publichealth.lacounty.gov/media/coronavirus/.
- LAC DPH: coronavirus website-assuring PPE:
 http://publichealth.lacounty.gov/acd/ncorona2019/PPE.htm
- LAC DPH CCF website: <u>http://publichealth.lacounty.gov/acd/nCorona2019/healthfacilities/ccf.</u>
- LAC DPH SNF website: http://publichealth.lacounty.gov/acd/ncorona2019/healthfacilities.htm#LTCFs.
- CCLD coronavirus page: https://www.cdss.ca.gov/inforesources/cdss-programs/community-care-licensing/covid-19-information-and-resources.





Healthcare Provider Information Hub LAHAN Alerts COVID-19 Press Releases DPH COVID-19 Public Page DPH COVID-19 Provider Hub: FAQs for Providers Isolation/Quarantine Testing Reporting

This webpage is specifically intended for the medical community.

Click here to visit DPH's COVID-19 webpage for the general public.

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On This Page

- Health Officer Order: Prevention of COVID-19 Transmission in Community Care Facilities (10-5-20)
- INFECTION CONTROL
 - Guidance for Congregate Residential Facilities
 - Poster highlighting best practices for COVID-19 infection prevention and control in CCFs
- TESTING TOOLKIT

Webinar: Developments in COVID-19 Testing for Community Care Facilities (9-29-20) Slides | Recording



Questions and Answers